**Concrete Barrier/Noise Wall Notes**

1. This railing has been structurally evaluated to be equivalent or greater in strength to a safety shape/Noise Wall combination railing which has been crash tested to NCHRP Report 350 TL-4 Criteria.

2. **Construction Requirements:** Construct the Concrete Barrier/Noise Wall and joints plumb; do not construct the Concrete Barrier/Noise Wall perpendicular to the roadway surface.

3. **Concrete:** Use Class II concrete for slightly aggressive environments. Use Class IV concrete for moderately or extremely aggressive environments. Concrete will be in accordance with Specification Section 346.

4. Construct \( \frac{1}{2} \) Open Joints plumb and perpendicular or radial to Gutter Line. Provide at 90'-0" maximum intervals as shown. \( \frac{1}{2} \) Open Joint locations are to coincide with \( \frac{1}{2} \) Expansion Joints in footings.

5. Construct \( \frac{1}{2} \) V-Grooves plumb and provide at 30'-0" maximum intervals as shown. Space V-Grooves equally between \( \frac{1}{2} \) Open Joints and/or Begin or End Concrete Barrier/Noise Wall. V-Groove locations are to coincide with V-Groove locations in footings.

6. 14'-0" Noise Wall End Taper is required when adjacent to an 8'-0" Concrete Barrier/Noise Wall and may be used when an 8'-0" Concrete Barrier/Noise Wall End Taper is provided (see Index 521-510 for details). See Roadway Plans for Concrete Barrier/Noise Wall End Treatment.

7. Work this Index with Index 521-510 - Concrete Barrier/Noise Wall (8'-0") and one or more of the following:
   a. Index 521-513 - Concrete Barrier/Noise Wall T-Shaped Spread Footing,
   b. Index 521-514 - Concrete Barrier/Noise Wall L-Shaped Spread Footing or
   c. Index 521-515 - Concrete Barrier/Noise Wall Trench Footing.

**Concrete Barrier/Noise Wall**

- **Begin or End 8'-0" Concrete Barrier/Noise Wall or End Taper (See Note 6)**
- **Begin or End 14'-0" Concrete Barrier/Noise Wall**

**Elevation of Inside Face of Concrete Barrier/Noise Wall**

- **1/2 V-Groove** in both faces and top of Concrete Barrier/Noise Wall
- **1/2 Open Joint**
- **30'-0" Maximum (See Note 5)**
- **Spacing 1/2 V-Groove**
- **3/8" V-Groove**
- **1/2 Open Joint**

**Plan (Reinforcing Steel not shown for clarity)**

(T-Shaped Spread Footing Shown, L-Shaped Spread Footing and Trench Footing Similar)

1/2 Open Joint

- **T-Shaped Spread Footing**
- **1/2 V-Groove in both faces and top of Concrete Barrier/Noise Wall**
- **1/2 Open Joint**
- **Gutter Line**
- **T-Shaped Spread Footing**
- **1/2 Open Joint**

**Cross Reference:**

For Section A-A, Detail "A" and Estimated Quantities, see Sheet 3.

For Expansion Joint Detail in Footing, see Index 521-513, 521-514 or 521-515.

- **Begin or End 8'-0" Concrete Barrier/Noise Wall or End Taper (shown)**
- **Begin or End 8'-0" Traffic Railing/Noise Wall or End Taper (shown)**
- **Outside Edge of Concrete Barrier**
- **T-Shaped Spread Footing**
- **1/2 Open Joint**
- **Expansion Joint in Footing (Typ.)**
- **T-Shaped Spread Footing**
- **1/2 Open Joint**

**Revision:**

11/01/17

**Description:**

REVISED FY 2018-19 STANDARD PLANS

**Concrete Barrier/Noise Wall (14'-0")**

INDEX 521-511

**Sheet 1 of 3**
ELEVATION OF CONCRETE BARRIER/NOISE WALL REINFORCING STEEL
(Bars 5S1 in Railing not shown for clarity)

NOTES:
1. Field Cut Bars 5R & 5S1 in Noise Wall End Taper as required to maintain minimum cover.
2. See Index 521-513, 521-514 and 521-515 for footing reinforcement.
3. 1/2" Open Joint may be omitted when 8'-0" Railing/Noise Wall End Taper is adjacent to a
   14'-0" Concrete Barrier/Noise Wall End Taper as shown on Sheet 1. See Index 521-510 for
   reinforcement details and spacing. Bars 5S2 are not required when 1/2" Open Joint is omitted.
4. Bar spacing shown is along the Gutter Line.
SECTION A-A
TYPICAL SECTION THRU CONCRETE BARRIER/NOISE WALL

NOTES:
1. See Index 521-513, 521-514 or 521-515 for footing reinforcement.
2. At 1/2" Open Joints, plug the lower 2" portion of the open joint by filling it with mortar in accordance with Specification Section 400.

CONCRETE BARRIER/NOISE WALL (14'-0")
INDEX 521-511
3 of 3